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FEED STUFF ANALYSES.

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ADDRESS

Chemical Department of
The Maryland Agricultural College,
College Park, Md.

ANALYSES OF

Commercial Feeding Stuffs Sold in Maryland

BY THE CHEMICAL DEPARTMENT OF

THE MARYLAND AGRICULTURAL COLLEGE.

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This bulletin contains the results of analysis of feeding stuffs made in this laboratory from June to November, inclusive. The arrangement is in alphabetical order of manufacturers.

To the usual analysis for Protein and Fat we have added that of Fiber, as the latter is of value in judging the purity of the feed.

Protein is the most important constituent of the feed, and the most expensive. It is absolutely necessary to the animal to build and repair muscle, nerve, sinew, hair, feathers, etc.; in fact, enters into the composition of all parts of the body. The amount of protein is obtained by finding the amount of nitrogen and multiplying this by 6¼.

Fat, or ether extract, is obtained by extracting a small part of the sample with ether for sixteen hours. Fat serves as a fuel or energy producer, or to build fatty tissue which is a reserve supply for the animal. Starch and sugar serve the same purpose, but are less than half as efficient. Protein can also serve as an energy and fat-producer, but its main function should be as a tissue builder.

Fiber is the indigestible part of the feed and, from the commercial standpoint, has no value as feed. Hulls, straw, etc., are high in fiber, so that the amount of fiber serves as an index of the amount of contamination with such materials. In the case of any given feed, as cottonseed meal, a low protein content will be accompanied with a corresponding high fiber content, caused by the added hulls.

It should be remembered that in coarse materials which are necessarily low in protein — as straw, oat hulls, peanut hulls, etc.—a smaller percentage of the protein present is digestible than in the case of high-grade feeds.

This department wishes to have the coöperation of feeders and dealers in the inspection of concentrated feeds and will be glad to analyze samples, provided samples of the same feeds have not been recently analyzed in the department. Before sending samples write for blanks and instructions. We will not analyze samples of medicines, "condition powders," condimental feeds, or the so-called "feeds" that are "five feeds for a cent" to be mixed with the regular feeds. Careful experiments at a number of the experiment stations have proved that these medicinal "feeds" are of no practical value.

The examination of the common feeds, as bran, middlings, corn meal, etc., will generally be limited to a microscopical examination for adulteration, as the slight variation in the chemical composition of the pure articles will not justify the expense of making a regular chemical analysis.

Concentrated feeding stuffs are generally by-products and the analysis of any one of them will vary some, depending on the method of preparation, etc.

The following should be the minimum analysis of the standard feeds named, and are given for comparison:

	PROTEIN.	FAT.
Cotton Seed Meal	40 Per Cent.	8 to 9 Per Cent.
Linseed or Flax Seed Meal—Oil Cake Meal	36 "	7 "
	38 "	2 " (new process)
Gluten Meal	33 to 36 "	2 "
Gluten Feed	25 "	3 "
Germ Oil Meal	23 "	10 "
Malt Sprouts	23 "	1 to 2 "
Dried Brewers' Grains	20 "	3 "
Wheat Middlings	17 to 18 "	5 "
Wheat Bran	15 "	4 to 5 "
Ground Oats	10 to 12 "	4 to 5 "
Corn Meal	9 to 11 "	3 to 5 "
Meat and Bone Meal	40 "	10 "
Meat Meal	60 "	10 "

It should be remembered that the analysis does not indicate the palatability of the feed, or if it is musty, moldy or sour. These conditions are generally easily recognized by simple inspection—the appearance, odor, etc., or by the animals refusing the feed. Moldy corn is frequently kiln-dried and, while this prevents further growth of the mold, it does not restore the feed to prime condition. It is not relished by animals, and is unwholesome. It is false economy to use damaged feed, even if the feed is "cheap."

ANALYSIS OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract.		Crude Fibre.	
				FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
19724	American Cotton Oil Co, Little Rock, Ark.	Choice Cotton Seed Meal	Baltimore	42.30	41.	9.54	9.	6.55	.....
19704	American Hominy Co., Indianapolis, Ind.	Hominy Meal	Rocks	9.21	11.48	6.70	3.50	3.84	.....
19719	American Linseed Co., New York, N. Y.	Old Process Oil Meal	Hagerstown	33.70	32.36	6.63	5.7	7.75	....
18237A	American Milling Co., Chicago, Illinois.	Sucrene	Hagerstown	17.81	16.50	5.87	3.50	10.21	.....
19701	American Milling Co., Chicago, Illinois.	Sucrene Dairy Feed	Elkton	17.99	16.50	5.56	3.50	11.45	.....
19705	American Milling Co., Chicago, Illinois.	Sucrene Horse and Mule Feed	Aberdeen	11.32	10.	3.75	3.	9.17	.....
18239A	American Milling Co., Chicago, Illinois.	Sucrene for Horse Mule and Ox	Hagerstown	12.46	10.	5.78	3.	9.91	.....
19716	American Milling Co., Chicago, Illinois	Sucrene Poultry Feed	Rising Sun	17.55	17.50	3.91	5.50	8.23	....
19723	Armour Fertilizer Works, Baltimore, Md.	Granulated Poultry Bone	Baltimore	25.45	25.	1.06	5.	1.08	.....
19715	Armour Fertilizer Works, Baltimore, Md.	Meat-Bone for Poultry	Massey	47.92	42.	8.97	8.	.54	.....
19749	Athey & Harrison Agents. Laurel, Maryland	Cotton Seed Meal	Laurel	35.63	36.	7.32	7.	9.81	.....
19717	M. F. Banenger, Philadelphia, Pa.	Pure Fine Hominy Meal	Rising Sun	10.35	.....	8.94	.....	3.92	.....
19725	Baugh & Sons Co., Baltimore, Maryland	Meat Meal for Poultry	Baltimore	63.00	50.	15.27	14.	1.28	.....
19726	J. Bolgiano & Son Co., Baltimore, Maryland.	Square Deal Chick Food	Baltimore	8.86	10.01	3.56	3.89	1.40	.....
19727	J. Bolgiano & Son Co., Baltimore, Maryland.	Square Deal Chick Starter	Baltimore	6.16	9.48	3.09	4.14	1.00	.....

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				FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
19728	J. Bolgiano & Son Co., Baltimore, Maryland.	Square Deal Pigeon Food....	Baltimore	9.83	11.06	3.01	4.44	1.45	.....
19729	J. Bolgiano & Son Co., Baltimore, Maryland.	Square Deal Poultry Food	Baltimore	7.72	11.50	3.25	3.87	1.90	.....
19730	John J. Buffington, Baltimore, Maryland.	Buff Brand Chick Feed	Baltimore	9.74	10.50	2.67	3.	2.62	.5
19731	Central Feed Co., Baltimore, Md.	Ready Horse Feed	Baltimore	9.61		4.05		4.55	.....
19732	Cockeysville Dairy Food Co., Cockeysville, Md..	Dairy Food.....	Cockeysville ..	17.20	18.	10.01	10.	14.05	.....
19706	Continental Cereal Co., Peoria, Illinois.	Continental Gluten Feed	Bel Air	29.05	35.	13.27	14.	9.95	.....
18240A	Corno Mills Co., East St. Louis, Illinois.	Corno Chick Feed	Baltimore	10.27	10.	2.35	3.50	1.91	.....
19733	Darling & Co., Long Island City, N. Y.	Pure Ground Beef Scraps	Baltimore	58.44	55.	11.32	10.0	2.54	.....
19714	Gaily Bros., Cardiff, Md.....	Ship Stuff	Cardiff	13.51	.....	3.86	.....	1.99	.....
19707	Great Western Cereal Co., Chicago, Ill.	Boss Chop Feed..	Bel Air	8.16	10.	2.69	5.	8.01	.....
19712	Great Western Cereal Co., Chicago, Ill.	Daisy Dairy Feed	Cardiff	14.30	14.	2.46	3.	11.63	.....
19734	Great Western Cereal Co., Chicago, Ill.	Sterling Chick Feed	Cockeysville ..	9.99	12.	2.58	3.50	2.00	.....
19735	Great Western Cereal Co., Chicago, Ill.	Sterling Scratch Feed	Cockeysville ..	10.62	12.	3.78	3.	3.29	8.
18238A	George L. Harding, Binghamton, N. Y	High Grade Beef Scraps	Hagerstown ..	37.47	43.	17.68	25.	1.22	.....
19747	Hoco Mills, Buffalo, N. Y.....	Jim Dandy Oat Feed	Baltimore	7.55	7.50	3.10	2.75	23.80	.....

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				FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
19750	Humphreys, Godwin & Co., Memphis, Tenn.	Cotton Seed Meal	Westminster ..	41.25	41.	8.94	8.	7.70	10.
19700	Chas. A. Krause Milling Co., Milwaukee, Wis.	Badger Dairy Feed	Derwood	17.29	18.	4.63	4.50	10.72	.....
1334	Larrowe Milling Co., Detroit, Michigan	Buckwheat Middlings	Laurel	11.23	.....	2.89	.....	25.43	.....
19754		Buckwheat Bran..		12.64	.....	3.17	.....	.....	.....
19720	Larrowe Milling Co., Detroit, Michigan	Dried Beet Pulp..	Manufacturer .	8.86	8.	.79	.5	18.35	20.
19708	Molasses Feed Co., Milwaukee, Wisconsin	Prize Dairy Feed	Bel Air	5.44	10.	2.57	3.	23.71	.....
19718	Milwaukee Grain and Feed Co., Milwaukee, Wis.	X.X.X. Molasses Grains	Colora	16.76	17.50	3.65	.....	.4.48	8.
19748	Ninety Six Oil Mill, Ninety Six, North Carolina	Standard Cotton Seed Meal	Baltimore	39.49	7.*	7.85	.....	.8.99	.....
19736	North-West Mills Co., Winona, Minnesota	Saratoga Dairy Feed	Baltimore	17.02	18.	6.31	4.50	10.04	.....
19737	North-West Mills Co., Winona, Minnesota	Saratoga Horse Feed	Baltimore	12.55	12.	5.69	3.50	11.54	....
19753	Patapsco Milling Co., Ellicott City Md.	Bran	Laurel	16.61	.....	4.88	....	7.11	.....
18241A	Pennsylvania Primo Feed Co., Harrisburg, Pa.	Little Jewel Chick Food	Baltimore	12.64	12.75	3.78	6.	2.01	.....
18242A	Pennsylvania Primo Feed Co., Harrisburg, Pa.	Matchless Egg Maker	Baltimore	14.13	13.50	4.63	6.	2.53	.....
19709	Pennsylvania Primo Feed Co., Harrisburg, Pa.	Primo Egg Maker	Cardiff	14.04	12.50	3.28	..	2.74	32.
19710	Pennsylvania Primo Feed Co., Harrisburg Pa.	Primo Golden Dairy Feed ..	Cardiff	25.80	25.	6.55	..	8.55	8.
19703	Pennsylvania Primo Feed Co., Harrisburg, Pa.	Primo Hercules Horse Feed	Laurel	15.27	15.	4.08	4.	8.43	..

19703	Pennsylvania Primo Feed Co., Harrisburg, Pa.	Primo Hercules Horse Feed	Laurel	15.27	15.	4.08	4.	8.43	. . .
19738	Pennsylvania Primo Feed Co., Harrisburg, Pa.	Pullet Growing Feed, Primo	Baltimore	10.35	11.06	2.80	3.77	2.48	3.24
19713	Pillsbury Mills Co., Minneapolis, Minnesota	Pillsbury X. X. Daisy	H. de Grace	17.99	16.	4.51	4.50	2.35	.....
19702	Quaker Oats Co., Chicago, Ill.	Schumacher Calf Meal	Elkton	21.24	19.	8.04	8.	2.74	.....
18236A	Quaker Oats Co., Chicago, Ill.	Schumacher Stock Feed	Woodsboro	10.09	10.	3.49	4.	11.39	.....
13320	James Quirk Milling Co., Montgomery Minn.	Bran	Fallston	15.71	14.50	5.55	4.40	.....	.....
13321	James Quirk Milling Co., Montgomery, Minn.	Middlings	Fallston	18.16	17.25	6.22	5.25	.....	.....
19721	Ralston Purina Co., St. Louis, Mo	Purina Feed	Manufacturer	12.50	12.50	4.57	4.	12.	8.9
19739	Ralston Purina Co., St. Louis, Mo	Purina Mash	Baltimore	16.41	.....	3.08	...	10.44	....
19740	Ralston Purina Co., St. Louis, Mo	Scratch Size	Baltimore	10.09	11.	3.13	3.	2.90	4.
19741	W. G. Scarlett & Co., Baltimore, Maryland.	Oriole Brand H.G. Poultry Feed	Baltimore	11.67	10.71	3.37	4.41	4.17	3.64
19742	W. G. Scarlett & Co., Baltimore, Maryland.	Shield Brand H G. Chick Feed	Baltimore	12.61	9.56	4.47	3.64	12.58	4.66
19743	C. S. Schermerhorn & Son, Baltimore, Md.	Prime Cotton Seed Meal	Laurel	38.87	38.61	8.02	...	9.31	....
19752	Sherwood Mills, Sandy Springs, Maryland.	Bran	Baltimore	15.62	.....	3.80	...	6.06	....
19744	W. A. Simpson & Co., Baltimore, Maryland.	Purity Poultry Food	Manufacturer	10.53	10.50	2.47	3.	2.86	4.
19751	Southern Cotton Oil Co., Charlotte, N. C.	Cotton Seed Meal	Westminster	39.05	38.50	6.66	6.	9.58	.....
19722	Stock Yards Cotton and Linseed Meal Co., Kansas City, Mo.	Caddo Cake	Baltimore	27.34	.....	7.25	.....	21.85	.....
19745	Taylor Manufacturing Co, Columbia, S. C.	Standard Cotton Seed Meal	Baltimore	35.63	39.	7.75	.....	5.25	.....
13322	Washburn-Crosby Co., Indianapolis, Ind.	Pillsburg Bran	Aberdeen	15.97	13.	5.35	4.	.....	.....
19711	J. Lindsay Wells Co., Memphis, Tenn.	Cotton Seed Meal	Rocks	40.63	41.	7.82	9.	8.72	.....
19746	Richard C. Wells, Baltimore, Md.	O. C. Horse Feed	Baltimore	9.44	...	4.67	.....	5.45	.....
18234A	Western Grain Product Co., Hammond, Ind.	Hammond Dairy Feed	White Hall	17.80	17.	5.80	3.	9.82	.....
18235A	Western Grain Product Co, Hammond. Ind.	Hammond Dairy Feed	Jefferson	16.50	17.	4.08	3.	10.47	

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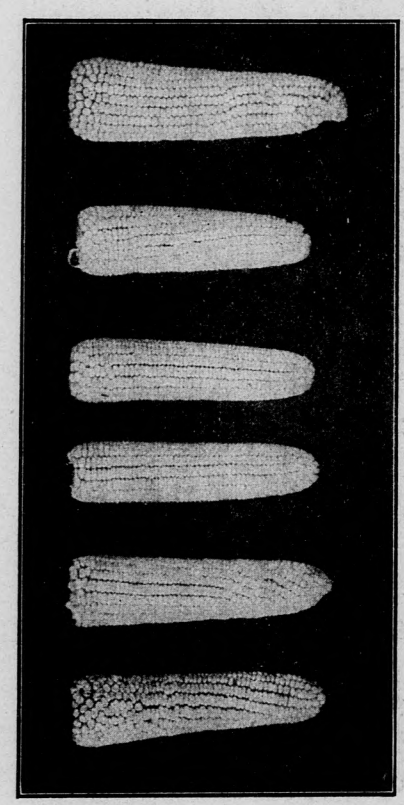

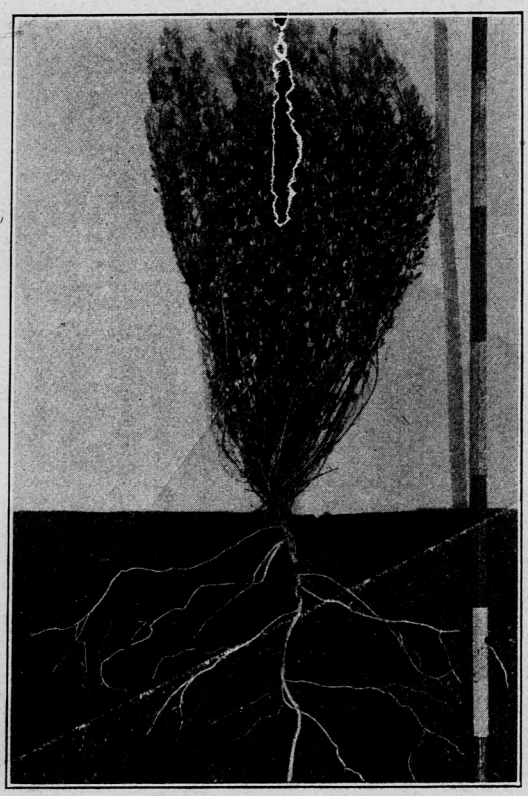

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